1. Area Specific Characteristics and Environmental Conditions. Section 10.1.2 of the ROD acknowledges several area-specific characteristics and environmental conditions that need to be considered in determining the appropriate technology to assign to a specific area of the river. These include: (1) contaminant concentrations; (2) current and reasonably anticipated future land and waterway use; (3) areas of erosion /deposition; (4) sediment bed slope; (5) infrastructure; (6) physical sediment characteristics. ROD Section 14.2.9, Design Requirements.

   The ROD acknowledges that site specific characteristics will need to be considered in determining the appropriate technology to assign to a specific area of the river. The site specific characteristics, however, only appear to be considered after a technology has been assigned in accordance with the decision tree.

   - QUESTION 1: Where is the flexibility in the decision tree to consider site specific characteristics in assigning an appropriate technology?

2. Depth of Contamination. The first decision box on Figure 28: Technology Application Decision Tree requires a determination of whether or not one is "Within SMA (See Note 1)". Note 1 states "Contamination is defined in three dimensions."

   - QUESTION 2: In this context, what does "[c]ontamination is defined in three dimensions" mean?
   - QUESTION 3: If surface sediment concentrations are below RALs, but there are RAL exceedances at depth, is one within an SMA or not?
   - QUESTION 4: Is there a minimum depth of sediment with concentrations below RALs which would make exceedances at depth irrelevant? For example, if there are two feet of clean sediment over sediment exceeding RALs, is dredging still prescribed? Five feet?

3. Capping without Dredging. In the Intermediate depth region, the Technology Application Decision Tree calls for "Dredge and/or Cap (See Design Requirements)" if NAPL and "not reliably contained" (NRC) PTW are not present. (underline added) However, the Section 14.2.3, *Intermediate Region* (ROD p. 108) states, "Under any scenario, the elevation of the top of the cap or residual layer will be no higher than the pre-design elevation …."

   - QUESTION 5: Under what scenario would capping without pre-dredging be allowed in the intermediate depth region?
   - QUESTION 6: To the extent that no cap can be placed in the Intermediate region without first dredging to the depth of the cap design thickness, under what scenario in *any* depth region is dredging not prescribed?

- QUESTION 7: Note that this would appear to preclude the option of increasing the valuable shallow water habitat as part of remedial action. This would be desirable, but it does not seem to be allowed. Is that EPA's intent?
- QUESTION 8: It appears that every pathway ends in either dredging, or dredging and capping. Does the decision tree allow flexibility for capping without dredging under any scenario?

4. Alternative / Other Remedial Technologies. The design requirements of the ROD include other technologies such as in-situ treatment and enhanced natural recovery (ENR). These technologies are not shown as remedial technologies applicable within SMAs. But, they are listed in Section 14.2.9 of the ROD (Design Requirements).

    - QUESTION 9: Why are these technologies not included for potential use within SMAs on the Technology Application Decision Tree (Figure 28)?
    - QUESTION 10: If supported by available data, will EPA accept alternate technologies specified in the ROD design requirements for areas exceeding RALs but below PTW thresholds? For example, if there is a lot of deposition, can one make the demonstration that partial dredge and cap, EMNR, or MNR is appropriate for an area exceeding RALs – would this be acceptable?

5. SMA Definition. QUESTION 11: Are the ROD SMAs the SMAs moving forward? Or will the boundaries change based on surface sediment recovery and stability? Said another way, can the SMA that the decision tree starts with be refined from what was presented in the ROD by new surface sediment data?

6. Remedial Action Areas.

    - QUESTION 12: How many of the 1,774 acres that EPA is allowing to recover naturally are already below cleanup goals?
    - QUESTION 13: Is it correct that the ROD is requiring that 365.3 acres of the total constructed area (394 acres), or 93%, is capping or dredging?
    - QUESTION 14: Is it correct that the ROD is limiting the application of ENR to 28.2 acres or 7% of the constructed areas?
    - QUESTION 15: If natural recovery (via naturally occurring processes such as biodegradation, etc.) is ongoing in a particular SMA or portion thereof, and if the levels are below PTW thresholds, would EPA consider EMNR or MNR in that area?

7. Decision Tree Selection. The ROD states at various points that technologies will be assigned in accordance with the FS decision trees. E.g., ROD at p. 106. QUESTION 16: Will the FS decision trees be used moving forward? Or were they superseded by the ROD decision tree (Figure 28)?

8. Design Issues.

    - QUESTION 17: Dredging may generate slope failure. Do the design requirements in Section 14.2.9 allow for consideration of the slope of the sediment bed in dredging design?
    - QUESTION 18: Do the design requirements in Section 14.2.9 allow for consideration of whether an area is depositional in assigning an appropriate technology?
    - QUESTION 19: Do the design requirements in Section 14.2.9 allow for consideration of the presence of rock/cobble/bedrock in assigning an appropriate technology?
    - QUESTION 20: Do the design requirements in Section 14.2.9 allow for consideration of the impact of dredging on habitat areas?
    - The Lower Willamette Group identified a more extensive list of design criteria than is shown in the ROD. Certain of those design criteria, such as whether an area is depositional, or whether there is rock/cobble/bedrock, are not included in the ROD. QUESTION 21: Is the omission intended or can those issues be considered in design? If so, how is that done under the decision tree?
    - The definition of structures in Figure 28 does not appear to be very flexible and is not particularly consistent with dock ownership and uses at various properties. QUESTION 22: How are such site-specific uses to be addressed given the decision tree's lack of recognition of such issues?

9. Riverbanks.

    - In ROD section 14.2.5, riverbanks are defined as "areas from top of bank down to the river that may be contaminated along the shoreline next to contaminated in-river shallow areas." QUESTION 23: How is the top of bank defined (elevation, abrupt change in slope angle, other)?

    - ROD Section 14.2.5 indicates that riverbank remedial actions will consist of, "Engineered caps or vegetation with beach mix will be placed as the final cover based on area-specific designs, which will account for appropriate slope according to the programmatic or site-specific Biological Opinion, as appropriate." Beach mix may be infeasible or inappropriate in some riverbank areas (e.g., above Ordinary High Water, or at relatively steep riverbanks). QUESTION 24: Does the ROD allow flexibility for riverbank capping with materials other than vegetation with beach mix?

    - Regarding remediation in the shallow region, ROD Section 14.2.4 states, "Under any scenario, the elevation of the top of the cap or residual layer will be no higher than the pre-design elevation to avoid loss of submerged aquatic habitat, preserve slope stability, and negate adverse impacts to the floodway." ROD Section 14.2.5 indicates that some riverbank remedial actions should be conducted in conjunction with the in-river actions to protect

the remedy. A riverbank remedial action could lead to the creation of new valuable shallow water habitat. QUESTION 25: Does the ROD allow for flexibility to consider the net benefit to overall habitat and function resulting from combined riverbank remediation and shallow region in-water remediation? For example, would EPA consider relaxing the shallow region requirement that "the elevation of the top of the cap or residual layer will be no higher than the pre-design elevation" if concurrent riverbank remediation would result in a net habitat benefit?

- ROD Section 14.2.5 states, "Remediation of contaminated river banks is included in the Selected Remedy where it is determined that it should be conducted in conjunction with the in-river actions and to protect the remedy (Figure 9 in Appendix I and Table 21 in Appendix II)."

    - QUESTION 26: Is riverbank remediation required throughout all riverbank areas shown on Figure 9?
    - QUESTION 27: Would riverbank remediation be required if source control measures such as erosion and storm water control are in place?
    - QUESTION 28: Can additional sampling and analysis (e.g., chemical testing, slope stability, etc.) be performed to modify the areas targeted for riverbank remediation on ROD Figure 9?